

CLAIMS:

1. A method of reclaiming brine waste in a water softener having an inlet, a service water outlet and a wastewater outlet, the operation of the softener including a brine/rinse cycle in which brine solution is directed through a resin bed of the softener to the wastewater outlet and ultimately to a drain, said
5 method comprising:

measuring a TDS or specific ion level of the solution generally adjacent the wastewater outlet during the brine/rinse cycle;

comparing the measured TDS or specific ion level with one of a
10 preset value and a value determined from the inlet water; and

diverting the flow of water out the wastewater outlet away from the drain to a reclamation location once the measured TDS exceeds the preset value.

2. The method of claim 1 further including continuing the measuring of the TDS or specific ion level of the solution generally adjacent the wastewater outlet and diverting the flow until the measured TDS or specific ion level falls below the preset value.

3. The method of claim 1 wherein the water softener includes a brine tank, and further including monitoring a brine front in the treatment tank, and diverting the water flow from the outlet to the brine tank approximately when the brine front reaches the outlet.

4. The method of claim 3 further including continuing the measuring of the TDS or specific ion level of the solution exiting the wastewater outlet and diverting the flow until the measured TDS or specific ion level falls below the preset value, then sending the flow to drain.

5. The method of claim 1 further including evaporating the water from the solution at the reclamation location.

6. The method of claim 5 further including sensing the presence of the solution at the reclamation location, energizing a compressor to cool a condensing mechanism, heating the solution with heat generated by the compressor, and collecting water condensing upon the condensing mechanism.

7. The method of claim 6 further including sensing the completed evaporation of the diverted solution and deenergizing the compressor.

8. The method of claim 6 further including collecting the remaining solids for disposal.

9. The method of claim 1 further including providing one of TDS level determination using sensing and reference electrode pairs for monitoring TDS level of the water exiting in the softener as waste.

10. The method of claim 1 wherein said reclamation location is a brine tank.

11. The method of claim 1 wherein said reclamation location is a storage tank where the liquid is collected and taken to an alternate location for treatment and disposal.

12. A waste reclamation unit configured for use with a water softener for reclaiming high TDS solution and preventing the discharge of that solution to drain, said unit comprising:

a housing in fluid communication with the water softener and
5 including at least one waste reservoir;

a compressor associated with said housing and including at least one coil;

a control unit associated with said housing and configured for sensing the introduction of liquid into said reservoir and for triggering said
10 compressor; and

a collection pan disposed in operational relationship to said at least one coil and configured for collecting water condensing on said at least one coil and preventing the entry of said water into said waste reservoir.

13. The unit of claim 12 wherein said housing includes separate waste reservoir and compressor chambers respectively for said reservoir and said compressor, and further including means for transferring heat generated by said compressor into said waste reservoir chamber.

14. The unit of claim 13 wherein said means for transferring heat is a fan, an infrared heater, a heat lamp, a heating pad, a ceramic heater, or heating strips/tape.

15. The unit of claim 12 further including an outlet on said housing in fluid communication with said collection pan.

16. The unit of claim 12 wherein said at least one coil and said collection pan are disposed in said housing above said waste reservoir.

17. The unit of claim 12 wherein said at least one waste reservoir is removable.

18. The unit of claim 17 wherein said at least one waste reservoir is disposable.

19. The unit of claim 12 further including a supplemental removable waste reservoir.

20. The unit of claim 12 further including an overflow or reservoir full sensor configured for sensing the level of liquid or solids in said at least one waste reservoir and energizing at least one of an alarm signal and a cutoff signal to the softener.